

## 1998 Partnership Award Recipients

### Cockroach Bay Restoration Project

Cockroach Bay is located in the southeast portion of Tampa Bay. The restoration area is a former shell mining area and much of the land serves as the last barrier between agricultural run-off and the bay ecosystem. Six hundred and fifty one acres including the shell pits, salterns (areas set aside for evaporation of seawater to produce salt) and upland habitat was purchased by Hillsborough County in 1991. The restoration project was initiated by the Surface Water Improvement and Management Department (SWIM) of the Southwest Florida Water Management District (SWFWMD). The Cockroach Bay Restoration Alliance (COBRA) was established through cooperation between federal, state, and local organizations to plan and carry out the restoration. Their objective is to restore a mosaic of habitats typical of estuarine/coastal environments while at the same time contributing to the improvement of the water quality of the bay.

The project involves two main phases. Phase 1, which involves the restoration of approximately 200 acres of primarily intertidal habitat and, phase 2, which focuses on upland habitat enhancement. One hundred and seventy five acres of various types of intertidal wetlands have been restored to date, ranging from intertidal wetland channel systems to open salterns. Stormwater ponds have been strategically placed, constructed and monitored, and are successfully filtering agricultural run-off before flowing into the bay. Thousands of volunteers have worked to remove illegally dumped solid waste from the salterns and have planted native plant species in intertidal areas. Federal, state and local governments are all stake holders in this effort as well as environmental groups, private industry, volunteer groups and educational facilities. Public support and the leveraging of resources make this a cost effective restoration project that can be an example to the rest of the nation.

**Significant Achievements:** The Cockroach Bay restoration project has successfully restored 175 acres of wetlands. A variety of habitats have been restored, providing diverse habitats for an array of species, many of them endangered. Furthermore, the partnerships that have been established as a result of this project have created a network through which future restoration activities can be implemented.

**Coastal America Objectives/Regional Economic Benefit:** The Cockroach Bay project is exemplary of a partnership approach that works to restore a coastal area. The benefits of this partnership approach have allowed the leveraging of funds from a variety of sources at the federal, state and local levels. Additionally, the project has involved the local community, including Americorps volunteers, a juvenile detention group, and numerous school groups, which in effect has raised awareness of the importance of wetland ecosystems. Finally, the restoration of the wetlands and the construction and careful placement of stormwater ponds have proven to be effective in filtering non-point source pollution that negatively effects estuarine and coastal habitats in the bay and beyond.

**Team Members:** EPA's Tampa Bay National Estuary Program, NOAA's National Marine Fisheries Service, U.S. Geological Service, U.S. Fish and Wildlife Service, and U.S. Army Corps of Engineers, the Surface Water Improvement and Management (SWIM) Program of the Southwest Florida Water Management District (SWFWMD), the Hillsborough County Environmental Lands and Acquisition and Protection Program, Hillsborough County Environmental Protection Commission, Florida Game and Freshwater Fish Commission, City of Tampa, Tampa Bay Regional Planning Council, Florida Department of Environmental Protection, Cockroach Bay User's Group, Peninsula Design and Engineering Inc., W.C. Reese Contracting Inc., Hillsborough County Road and Street Department, Hillsborough County Parks and Recreation Department, Hillsborough Community College, Lewis Environmental Services, Tampa BAYWATCH, TECO and Leisey Corporation

## **Aberdeen Proving Grounds Submerged Aquatic Vegetation Program**

For many years Aberdeen Proving Ground (APG) tried to establish a Submerged Aquatic Vegetation Program in the Chesapeake Bay. Due to limited resources, APG was obliged to seek a cooperative solution. Submerged aquatic vegetation (SAV - i.e., seagrass), serves as nursery grounds to juvenile fish and invertebrates, and acts to diffuse wave energy. Maintaining seagrass beds is an integral part of managing the Chesapeake Bay ecosystem. Partnership between the Army, EPA, U.S. Fish and Wildlife, U.S. Department of Agriculture and educational facilities enabled Aberdeen Proving Ground to initiate an SAV program, consisting of mapping and monitoring of existing seagrass beds and the planting of degraded seagrass beds. The Aberdeen SAV program increased EPAs mid-channel monitoring sites to 40 and combined the varying data collection techniques of other agencies to determine both baywide and site specific information. In addition the Aberdeen SAV program has provided some of the most detailed GIS data on seagrasses of any SAV program to date.

## **Airborne Lidar Assessment of Coastal Erosion Project**

This project developed technology to document shoreline change, a critical data element in coastal management. In this project, technology developed by NASA to map polar ice sheets, was adapted by NASA, NOAA, Army Corps of Engineers, and U.S. Geological Survey for use as a coastal management tool. Laser beach mapping utilizes aircraft mounted lasers that can accomplish in a few days what would take weeks using traditional ground survey methods. This new technology has the potential to help coastal zone managers monitor erosion and/or accretion in a faster and more cost effective manner. This technology has the potential to be used nation wide and scientists are working with coastal managers and other groups to determine how to best format and present the information so that states can undertake their own beach surveys within national standards.

## **Southeastern Shoreline Vectorization Project**

In response to a need from coastal managers to have GIS maps of the southeastern coastline NOAA and the Americorps National Civilian Community Corps volunteers coordinated in a labor intensive effort to map the coasts of North and South Carolina, Georgia, Alabama and Louisiana. The need for this work had been well established, but it was only until Americorps volunteers provided the needed labor that the project could be completed. NOAA's Coastal Services Center senior spatial data analysts trained volunteers on the basics of GIS and the appropriate hardware and software needed to complete the project. NOAA was able to provide coastal managers with needed GIS information with no cost for labor. The Americorps volunteers provided this service and gained technological training useful in today's job market.

## **Cape Florida Wetland Restoration**

During the 1950s the Cape Florida wetlands were eliminated through the deposition of dredge fill. An upland habitat was created and a dry land forest of invasive Australian pines replaced the estuarine wetlands. In 1992 Hurricane Andrew passed over the area, leveling most of the trees. With more knowledge of the importance of wetlands more than thirty years later, the Florida Department of Environmental Protection drafted a plan for the restoration of the wetlands to their original state. Fifteen state, local and federal partners participated in the restoration of 85 acres of wetland. To reduce disposal costs, fill was marketed to local developers and sand fill of beach quality was recycled back onto local beaches.

## **Trestle Bay**

Trestle bay restoration project is located at river mile 7 at the South Jetty on the Columbia River. The Columbia River South Jetty was obstructing the passage of fish into the river and also blocked the flow of detritus, an important food source, from the river to the estuary. The Trestle Bay restoration group, lead by the Army Corps of Engineers knew that if they modified the jetty structure it would restore proper detrital flows and fish migration to the estuary and river. Since the modification to the South River Jetty, 603 acres of subtidal mudflat and intertidal marsh/mudflats have been restored, enhancing the export of vegetative detritus and serving as foraging grounds for many species of fish and invertebrates. In addition economically important fish species, such as salmonids, herring, anchovy, and sturgeon are now able to pass the South Jetty to get to spawning grounds up river.

### **Duck Creek Advisory Group**

Duck Creek, located in Juneau, Alaska is a five mile long creek that is considered damaged by non-point source, urban pollution. Duck Creek historically supported important runs of various anadromous fish species, such as coho and chum salmon, cutthroat trout, and Dolly Varden char. Today the chum salmon run is extinct and the coho run is down to less than twenty fish. The anadromous fish species have suffered because of physical habitat alteration, poor water quality, loss of riparian and wetland vegetation, due in part to a lack of proper management. The Duck Creek Advisory Group was formed with federal, state and local interest groups, including small businesses and volunteer groups. An outdoor laboratory has been set up for students in the area to learn about conservation and to help in the restoration effort.